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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,179	05/01/2001	Mitsuhiro Nada	205007US-2	2561

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ALEXANDRIA, VA 22314

EXAMINER

TRAN, DALENA

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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16

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Commissioner for Patents

Office Action Summary

Application No.

09/845,179

Applicant(s)

NADA, MITSUHIRO

Examiner

Dalena Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 9/17/03. As per request, claims 1,16,20-21, and 29-31 have been amended. Thus, claims 1-51 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-22, 25-26,29-45, and 48-49, are rejected under 35 U.S.C.103(a) as being unpatentable over Abe et al. (5,590,040) in view of Kamiya et al. (5,111,686).

As per claims 1,25-26,30, and 48-49, Abe et al. disclose an abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data used for abnormality diagnosis corresponding to an abnormal event when an abnormality is detected in the vehicle, comprising: a common data storing section for storing as the abnormality diagnostic data for a plurality of abnormal events, common data which is common irrespective of the detected abnormal events (see columns 1-2, lines 41-27). Abe et al. do not disclose inherent data storing. However, Kamiya et al. disclose an inherent data storing section for storing as the abnormality diagnostic data, inherent data which is associated with each of the events, the inherent data includes data of a component which relates to the abnormal event (see the abstract; and columns 1-2, lines 35-26; and column 3, lines 14-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Abe et al., by combining

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inherent data storing in order for a diagnostic evaluation of the operating condition of vehicle engine is achieved based on function relationships with respect to currently measured engine parameter values and correlating a plurality of evaluative judgments regarding engine operating parameters.

As per claims 2, and 31, Abe et al. disclose storing the abnormality diagnostic data (see the abstract), judging an abnormal event when the abnormality is detected (see column 3, lines 30-36). Abe et al. do not disclose selecting the inherent data corresponding to the judged abnormal event. However, Kamiya et al. disclose selecting the inherent data corresponding to the judged abnormal event (see column 3, lines 14-67), and writing the selected inherent data together with the common data to the storing as the abnormality diagnostic data corresponding to the abnormal event (see column 4, lines 1-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Abe et al., by combining selecting the inherent data corresponding to the judged abnormal event, and writing the selected inherent data together with the common data to the storing for accurately stores conditions of abnormality of vehicle components and diagnoses the fault relate to each event.

As per claims 3,10, and 32, Abe et al. disclose common data includes data indicative of behavior of the vehicle (see column 2, lines 13-42).

As per claims 4-5,11-15,33-34,37, and 41-44, Abe et al. do not disclose inherent data includes a plurality of data, and data length of each data is constant irrespective of a difference in the abnormal events. However, Kamiya et al. disclose the inherent data includes a plurality of data, and data length of each data is constant irrespective of a difference in the abnormal events (see columns 4-5, lines 58-42). It would have been obvious to one of ordinary skill in the art at

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the time the invention was made to modify the teach of Abe et al., by combining inherent data includes a plurality of data, and data length of each data is constant irrespective of a difference in the abnormal events for automatically reproducing the operating conditions at the time of fault occurrence from stored data.

As per claims 6, and 35, Kamiya et al. disclose a common storing region in which each of the inherent data can be commonly stored, and writes the inherent data to the common storing region (see column 4, lines 1-57).

As per claim 7, Abe et al. disclose common data includes data indicative of behavior of the vehicle (see column 2, lines 13-42).

As per claims 8,9,36, and 38, Kamiya et al. disclose the inherent data includes a plurality of data, and data length of each data is constant irrespective of a difference in the abnormal events (see columns 4-5, lines 58-42).

Claim 16 is a method claim corresponding to system claims 1-2 above. Therefore, it is rejected for the same rationales set forth as above.

Claims 17-19 are method claims corresponding to system claims 1-2 above. Therefore, they are rejected for the same rationales set forth as above.

As per claim 20, Abe et al. disclose an abnormality diagnostic system capable of storing on a vehicle abnormality diagnostic data corresponding to an abnormal event detected in the vehicle, comprising: a processor configured to identify the detected abnormal event with a diagnostic code (see columns 3-4, lines 37-4), a common data storing section configured to store, as the abnormality diagnostic data for a plurality of abnormal events, common data which is common against all abnormal events irrespective of the detected abnormal event (see column 4,

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lines 5-41; and column 5, lines 5-34). Abe et al. do not disclose inherent data storing. However, Kamiya et al. disclose an inherent data storing section configured to store data selectively obtained in accordance with the diagnostic code, the data being identified as inherent data associated with the detected abnormal event (see the abstract; and columns 1-2, lines 35-26; and column 3, lines 14-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Abe et al., by combining inherent data storing in order for a diagnostic evaluation of the operating condition of vehicle engine is achieved based on function relationships with respect to currently measured engine parameter values and correlating a plurality of evaluative judgments regarding engine operating parameters.

Claim 21 is method claim corresponding to system claim 20 above. Therefore, it is rejected for the same rationales set forth as above.

As per claims 22, and 45, Kamiya et al. disclose the common data and the inherent data corresponding to detected abnormal events are stored in the common data storing section and the inherent data storing section respectively, as long as there are unused memory location in the common data storing section and the inherent data storing section (see columns 1-2, lines 35-26; and column 3, lines 14-67).

4. Claims 23-24, 27-28, 46-47, and 50-51, are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. (5,590,040), and Kamiya et al. (5,111,686) as applied to claims 1, and 30 above, and further in view of Takaba et al. (5,506,773).

As per claims 23-24, and 46-47, Abe et al., and Kamiya et al. do not disclose common and inherent data corresponding same abnormal events, are stored in the common data and inherent data storing section for each of the substantially same abnormal events. However,

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Takaba et al. disclose common and inherent data corresponding to a first abnormal event is stored in a first memory area which is different from a second memory area in which the common and inherent data corresponding to a second abnormal event, and common and inherent data corresponding to successively occurring and substantially same abnormal events, are stored in the common data and inherent data storing section for each of the substantially same abnormal events (see column 6, lines 26-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Abe et al., and Kamiya et al. by combining common and inherent data corresponding same abnormal events, are stored in the common data and inherent data storing section for each of the substantially same abnormal events for analyzing the malfunction of vehicle component to prevent error when the diagnostic data is read out.

As per claims 27 and 50, Abe et al., and Kamiya et al. do not disclose inherent and common data are stored in an order. However, Takaba et al. disclose the inherent and common data corresponding to successively detected abnormal events are stored in an order in which the abnormal events are detected (see columns 5-6, lines 47-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Abe et al., and Kamiya et al. by combining the inherent and common data corresponding to successively detected abnormal events are stored in an order in which the abnormal events are detected for perform a necessary specific work procedure sequentially according to the priority of abnormal diagnostic.

As per claims 28 and 51, Abe et al., and Kamiya et al. do not disclose numbers or symbols corresponding to the order are stored. However, Takaba et al. disclose in addition to

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storing data corresponding to abnormalities in an order in which the abnormalities are detected, numbers or symbols corresponding to the order are also stored together with a diagnostic code and a freeze frame data (see column 5, lines 1-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Abe et al., and Kamiya et al. by combining numbers or symbols corresponding to the order are also stored together with a diagnostic code and a freeze frame data for identifying the portion which has generated the abnormal signal and a value of the abnormal signal.

Remarks

5. Applicant's argument filed on 9/17/03 have been fully considered, the new ground of rejections as above as a result of the new amended claims.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

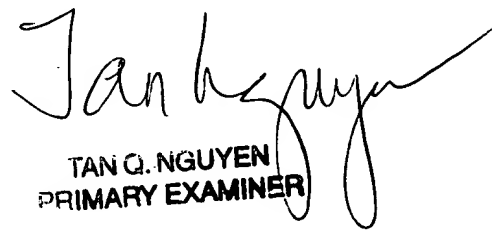
A shorten statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE MONTHS** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136 (a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The examiner can normally be reached on M-F (7:30 AM-5:30 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


TAN Q. NGUYEN
PRIMARY EXAMINER

/dt
December 12, 2003